

# Anchorage Amateur Radio Club

## General Membership Meeting September 3

Hamfest 1999  
 AARC Boardmeeting Minuets  
 SB news @ AMSAT  
 STS-93 is a SAREX success!

### IN THIS ISSUE:

ULS ham radio phase-in period begins  
 FCC audits New York examination session  
 And Much Much More

#### Officers

|                            |                     |
|----------------------------|---------------------|
| <b>President</b>           | Peter Bailey WL7BW  |
| <b>Vice President</b>      | Susan Woods NL7NN   |
| <b>Secretary</b>           |                     |
| <b>Treasurer</b>           | Paul Spatzek WL7BF  |
| <b>Trustee</b>             | John Wolfe AA0NN    |
| <b>Activities Chairman</b> | John Lynn KL0CY     |
| <b>News Letter Editor</b>  | Edythe Lynn KL0EO   |
| <b>Membership Chairman</b> | Fred Erickson KL7VC |
| <b>Past President</b>      | Rob Wilson AL7KK    |

#### Three Year Board Members

|                       |
|-----------------------|
| Bruce McCormick WL7YR |
| John Orella KL7LL     |
| Harvey Rookus NL7DK   |

#### One Year Board Members

|                      |
|----------------------|
| Edythe Lynn KL0EO    |
| Corney Eastman KL0FK |
| John Murray NL7WW    |
| Steve Gehring KL7DC  |
| Fred Erickson KL7VC  |

#### AARC web page & Email contact addresses:

<http://kl7aa.akconnect.com>  
 president to [windsman@alaska.net](mailto:windsman@alaska.net)  
 webmaster to [kl7aa@lawson.akconnect.com](mailto:kl7aa@lawson.akconnect.com)  
 membership to [frederickson@iname.com](mailto:frederickson@iname.com)  
 activities to [kl0cy@arrl.net](mailto:kl0cy@arrl.net)

#### News Letter Submissions, Information or corrections:

Submissions must be received 2 weeks before meeting  
 Email: [KL0CY@arrl.net](mailto:KL0CY@arrl.net) Facsimile: 907-338-4791  
 Mail: 7013 Trafford Ave. Anchorage 99504

#### KL7G CODE PRACTICE SCHEDULE

Schedule: 7:00am, 10:00am, 4:00pm, 7:00pm, 10:00pm  
 AK time, every day Frequencies: 3575 kHz, 7075 kHz &  
 145.35 MHz: Sending Speeds: 22 wpm, 15 wpm, 7 wpm

#### Nets in Alaska:

The following nets are active in South-central Alaska:  
 Alaska Sniper's Net 3.920 MHz 6:00 PM daily  
 Alaska Bush Net 7.093 MHz 8:00 PM daily  
 Alaska Motley Net 3.933 MHz 9:00 PM daily  
 Alaska Pacific Emergency Preparedness Net 14.292 MHz  
 8:00 AM M-F  
 QCWA net 146.97/.37 repeater Sundays 8:00 PM local  
 850 No Name Net 146.85/.25 repeater Sundays 8:00 PM  
 Son of Sideband Net 144.20 USB Mondays 9:00 PM local  
 Big City Simplex Net 146.520 FM Tuesdays 8:00 PM local  
 ARES net 147.30/.90 MHz Thursdays at 8:00 PM local  
 PARKA net 147.30/.90 MHz Thursdays at 9:00 PM local

#### Anchorage & Mat Valley Area Repeaters

KL7AA systems at Flattop Mt., 2,200 ft  
 146.34/94 MHz, 80 watts, autopatch, 100/141.3 Hz PL  
 223.34/224.94, 25 watts, no patch, no PL  
[144.70/449.70.25](http://144.70/449.70.25) watts, autopatch, 100/141.3 PL  
 KL7ION at Mt. Gordon Lyon 4,700 ft  
[147.30/90](http://147.30/90) MHz - 80 watts, no patch, no PL  
 KL7AA, Mt. Alyeska, 2,400 ft.  
[146.16/76](http://146.16/76) MHz, 25 watts, no patch, 141.3 Hz PL  
 KL7CC, Anchorage Hillside, SCRC club  
[temporary down 146.97/37](http://146.97/37) MHz, autopatch, 103.5 Hz PL  
 KL7DJE at Grubstake Peak, 4,500 ft.  
[147.09/.69](http://147.09/69) MHz, 25 watts, no patch, 100 Hz PL  
[144.925/449.925](http://144.925/449.925), 10 watts, no patch, 141.3 Hz PL  
 KL7JFU, KGB road, MARA club  
[146.85/.25](http://146.85/.25), autopatch, no PL  
 KL7AIR Elmendorf, EARS  
[147.27](http://147.27) simplex pending repeater frequency change  
 KL7G West Anchorage & Events  
[149.65/444.65](http://149.65/444.65) MHz, patch, no PL

#### Anchorage & Mat Valley Simplex Frequencies

146.52 Mhz Calling and Emergency frequency  
 147.57 / 447.57 (crossband linked) HF spotters & chat  
 146.49 Mhz Anchorage area simplex chat  
 146.41 MHz Mat Valley simplex chat



**GUEST SPEAKERS, DEMOS, PRIZES AND MORE AT  
THE HAMFEST**  
*by Lil Marvin, NL7DL*

For those of you who still haven't marked off the dates on your calendar for the Anchorage Amateur Radio Club Hamfest, this is your last newsletter reminder. The Hamfest will be held on Saturday and Sunday, September 25th and 26th at Kincaid Park, the same location where it has been for the last several years.

As we have previously indicated, Gordon West will be in attendance for the third year in a row (I think Gordon really likes Alaska!) In case you missed the information in last month's newsletter, along with his regular demos and speeches, Gordon has offered to teach an all day code class, for a fee, to all of you who are interested in HF operations, but who don't yet have that code. If you are interested, contact Gordon at 1-714-549-5000 Monday through Friday from 10:00 AM to 4:00 PM PST (that's Pacific Standard Time for those of you who don't know). You can also reach his 24-hour fax at 1-714-434-0666. For code study materials, contact Rick or Lil Marvin at 277-6741 or email them at [rlment@alaska.net](mailto:rlment@alaska.net). Begin studying the code NOW in order to be ready for Gordon's class.

We have learned to our delight that Gordon will be bringing his lovely bride Susy N6GLF along with him on this trip. Susy accompanied him to Alaska two years ago. She often works with Gordon on his various projects and trips. We look forward to seeing Susy again. Just as an aside, both Susy and Gordon are cat lovers, for those of you who have cats and might want to exchange a cat story or two with them.

Augie Hiebert will be making his debut with the Hamfest as a guest speaker and banquet speaker this year. Augie was the inventor of the fax machine and was the man who established both radio and television in Alaska. If you have a copy of the book *Airwaves Over Alaska*, by Augie's daughter Robin Chlupach, you might bring it to the Hamfest and have Augie sign it. And then ask him about the history of radio and television in Alaska.

Talk to the American Radio Relay League's Northwest Division Director Greg Milnes W7OZ who will also be in attendance. Greg is a "people person" who would love to talk to Alaska hams about their concerns for the hobby in the 49th state. He will also be more than happy to answer all your questions about the ARRL and its latest doing's.

Dave Roddy of Radio Depot of Seattle is still planning on sending a representative, along with a truckload of radios, to the Hamfest. This is good news for those of you who are looking to buy a brand new out-of-the-box radio. Once again, it looks like we are going to have a radio vendor at the Hamfest.

Van and Caroline van Iderstine of Alabama, owners of VIS Amateur Radio Supply, will also be attending the Hamfest. They will be bringing antennas and radio accessories. Another reminder that you folks will have to opportunity to completely equip your ham station. And if VIS Amateur Radio sounds familiar, perhaps it is because Caroline developed those little study cards that some of you may have used to help you get your amateur radio license.

Jim Larsen AL7FS has offered to give another demonstration on QRP operations for those of you who would like to operate on low power. Learn how to lose dependence on those amplifiers, use low power and still talk to your friends in Europe, Africa, South America, North America, and Asia (especially Japan!). For you ARES people (and even for you non-ARES people) we will also be giving a demonstration on how to use some of those radios that you don't even know how to turn on. Bring your radios and YOUR MANUALS and we will help to show you how to turn them on and program them, etc. After that, we will give you some pointers on proper radio operations. All this and door prizes, auctions, banquet (Saturday evening at the Regal Alaskan), VEC tests, FCC commercial radio license tests (contact Rick or Lil at the above phone number or email them for info on the commercial exams) and more at the Hamfest. See You There!!!!

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**AARC Boardmeeting Minutes 8-10-99**

The Anchorage Amateur Radio Club Boardmeeting was held on Tuesday evening, August 10th at Boniface Bingo at 380 Boniface Blvd.

The meeting was opened at 7:03 PM by Vice President Susan Woods NL7NN. The following were in attendance: John Lawson, NL7NC, Susan Woods, NL7NN, John Wolfe, AA0NN, John Murray, NL7WW, Paul Spatzek, WL7BF, John Orella, KL7LL, John Lynn, KL0CY, Harvey Rookus, NL7DK, Bruce McCormick, WL7YR, David Stevens, KL7EB, Edythe Lynn, KL0EO, Fred Erickson, KL7VC, President, Peter Bailey, WL7BW, Cornelius Eastman, KL0FK, and Lil Marvin, NL7DL.

Secretary Lil Marvin, NL7DL, read the minutes for the July boardmeeting. Paul Spatzek, WL7BF, moved and John Lynn, KL0CY, seconded that the minutes be accepted. Motion was carried. Treasurer Paul Spatzek, WL7BF, reported that he had presented a check in the amount of \$300.00 to John Lynn KL0CY for the Field Day pins. The check has been sent to the ARRL. No donations have been made.

John Lawson, NL7NC, reported an intake of \$6300.00 for the month of May and about the same for the month of June. He reported a balance of about \$9000 in the account. He needs a check in the amount of \$3000.00 from Treasurer Paul Spatzek, WL7BF, for payment to the IRS for tax purposes. John also reported that there will be a new bingo hall in Mountain View, sometime after Labor Day, near the Red

Apple grocery store, but he doesn't feel that it will present a problem for the club. Since one of the gaming account signatories will be leaving the state soon, the board has brought the gaming account signatures up-to-date. There was no VHF/UHF report.

## OLD BUSINESS:

Paul Spatzek, WL7BF, has reported that he has received a more positive response regarding obtaining the use of the van. He is still working on it.

Bruce McCormick, WL7YR, reported that the radio station for the Red Cross has been moved. Any spare money from this project will be used to pay for concrete for the base (unless Bruce can get the concrete donated), and for the use of a jackhammer to break up the asphalt. Bruce estimates that they will need approximately 23 bags of concrete. They still need to dig a hole and will hopefully start putting in the base in the next two weeks.

John Lynn, KL0CY, reported that the Hope 6-Mile Paddlefest was handled very well via simplex. He reported that he made \$121.00 before expenses from the monthly club raffle. He would like to offer an antenna analyzer for a future door prize and is open for suggestions on other possible amateur-related door prizes. John Wolfe, AA0NN, reported that he has some club jackets available for door prizes.

Membership chairman Fred Erickson, KL7VC, requested a copy of the Life Membership certificate.

## NEW BUSINESS

John Lynn, KL0CY, had the following recommendations for the board:

1. He moved that the board subsidize door prizes for up to \$200.00 per month. John Orella, KL7LL, seconded the move. Peter Bailey, WL7BW, suggested that this would provide incentive to get members to attend the meetings. The more important door prizes are being announced in the newsletter and on the nets. The move was carried. Ideas for door prizes may be emailed to [johnlynn@gci.net](mailto:johnlynn@gci.net) or [kl0cy@arrl.net](mailto:kl0cy@arrl.net)

2. John Lynn KL0CY made a motion to purchase duplexers for not to exceed \$1800.00 but withdrew the motion when he was informed by John Lawson NL7NC and Susan Woods NL7NN that a package including repeater and duplexers had already been approved in the past.

3. John Lynn, KL0CY, moved that the board buy one Bendix-King 250-channel radio and one Bendix-King 14-channel radio for an amount not to exceed \$1000.00. The motion was seconded by Bruce McCormick, WL7YR. The motion carried. John Lynn then moved that the board approach the general membership to buy the two remaining Bendix-King radios for an amount not to exceed \$1500.00. The move was seconded by Cornelius Eastman, KL0FK. The motion carried.

John Lawson, NL7NC, gave a discussion on the budget procedures. The budget is presented by the treasurer to the

general membership. There is a line in the budget which allows for expenditures on repeater equipment without approaching the general membership. John, KL0CY suggested making a change in the bylaws to allow expenditures up to \$2000.00 instead of \$1000.00 in order to give the board more latitude in regards to expenditures.

President Peter Bailey, WL7BW, suggested that the board and club members give their input to the treasurer Paul Spatzek, WL7BF, as to what they would like to see in the budget. These are to be preliminary ideas for a future budget. John Lawson, NL7NC, will give newsletter editor Edythe Lynn, KL0EO, a copy of the current budget. It was decided to table this proposal for the time being.

John Lawson, NL7NC, spoke with Doug Dickinson, KL7IKX, on the idea of documenting the AARC repeater sites with pictures and videos, etc. He would put the pictures and videos on the club's website and use them as a future program for the club meetings. He requested that the next time the VHF committee and crew go up to any of the repeaters, they take pictures. John Wolfe, AA0NN, briefly discussed the reflector site which has been running on the internet. John's onsite email is [jwolfe@bigfoot.com](mailto:jwolfe@bigfoot.com).

Edythe Lynn, KL0EO, moved that the board adjourn. The meeting was closed at 8:30 PM.

Respectfully submitted,

Lil Marvin NL7DL Secretary

## AMATEUR RADIO ON ISS SPACENEWS

**JULY 19, 1999**

After a tremendous amount of work by Frank Bauer, KA3HDO,

<http://garc4.gsfc.nasa.gov/~ka3zyx/ariss/ariss13.jpg> and his team of volunteers at Goddard Space Flight Center, the transceivers, TNC, power supplies, and harnesses for the initial transportable ARISS station are ready. The hardware was shipped to KSC on July 9th where it will be loaded into the STS-101 SpaceHab module. Launch of mission STS-101 to the ISS is contingent upon successful launch of the Russian Service Module. A picture of the hardware is available at: <http://garc4.gsfc.nasa.gov/~ka3zyx/ariss/ariss8.jpg> Initial amateur radio operations on ISS will consist of voice and AFSK packet on both 2m and 70cm. Future upgrades will include more bands and modes.

The ARISS external antennas will be mounted on the outside of the ISS Service module during a spacewalk scheduled for STS-101. The external antennas are the responsibility of the

Italian ARISS team. A picture of the prototype antenna is shown in <http://garc4.gsfc.nasa.gov/~ka3zyx/ariss/ariss13.jpg> on the top of the shelf to Frank's left. The pyramid shaped structure is the L/S-band antenna mounted on its EVA hardware. Four external antennas will be flown to allow support of amateur communications on the HF, VHF, UHF, L band (including GPS receive) and S bands.

[Info via Will Marchant, KC6ROL - AMSAT-NA SAREX Operations Manager]

[Info via Will Marchant, KC6ROL - AMSAT-NA SAREX Operations Manager]

**STS-93 SAREX INFORMATION**  
***SPACENEWS***  
***JULY 19, 1999***

STS-93 is the 25th and final flight of the Space Amateur Radio Experiment (SAREX) on board the space shuttle. Amateur radio in human spaceflight will continue the fine tradition set by Shuttle and Mir on board the International Space Station. This will take the form of the multi-national Amateur Radio on the International Space Station (ARISS) project. Flight hardware for ARISS is being prepared for launch to the ISS at the end of this year. Launch of Columbia on the STS-93 mission is currently set for 04:36:00 UTC on 1999-Jul-20. Here is a pre-launch set of estimated orbital elements from WA5NOM:

STS-093  
1 99093U 99202.11969685 .00195261 00000-0 45118-3 0 39  
2 99093 28.4716 190.1407 0001364 70.2068 289.8869  
15.95498675 165

Satellite: STS-093  
Catalog number: 99093  
Epoch time: 99202.11969685 = (21-Jul-1999 02:52:21.808  
UTC)  
Element set: 003  
Inclination: 28.4716 deg  
RA of node: 190.1407 deg Space Shuttle Flight STS-093  
Eccentricity: .0001364 Prelaunch element set JSC-003  
Arg of perigee: 70.2068 deg Launch: 20-Jul-1999 04:36:00  
UTC  
Mean anomaly: 289.8869 deg  
Mean motion: 15.95498675 rev/day Gil Carman  
Decay rate: 1.95261e-03 rev/day^2 NASA Johnson Space  
Center  
Epoch rev: 16  
Checksum: 346

Deorbit: 25-Jul-1999 02:31 UTC (orbit 79) MET 04/21:55  
Landing: 25-Jul-1999 03:23 UTC (orbit 80) MET 04/22:47

Most pre-launch orbital elements are the "OMS-2" set which is good for right after orbit insertion. On this mission there will be more maneuvering for the deployment of the Chandra

X-ray Observatory. The element set given above is the OMS-4 estimate. This describes the orbit during the time period when the school contacts (and most of the amateur radio operations) will occur.

The STS-93 crew consists of:

Eileen Collins, KD5EDS, Commander

### Jeffrey Ashby, Pilot

Cady Coleman, KC5ZTH, Mission Specialist 1

Steven Hawley, Mission Specialist 2

Michel Tognini, KD5EJZ, Mission Specialist 3 the following frequencies will be used by the Space Shuttle during SAREX operations:

## Uplink Downlink

## Packet 144.49 145.80 MHz

European voice 144.49 145.80 MHz

Voice (except over Europe) 144.47 145.80 MHz

Voice (except over Europe) 144.45 145.80 MHz

School contacts 145.80 MHz

Gil Carman, WA5NOM reported that the crew has expressed a preference for voice mode instead of packet during the periods when they are awake, with the packet robot on only during sleep periods. All passes over the continental U.S. are during their awake shifts, and all sleep passes will be over Asia and South America. So, U.S. stations may have very little, if any, packet opportunities on this flight.

Voice: Please listen on the downlink for the crew to call CQ. If the crewperson is in the middle of a contact, PLEASE WAIT until they are done. Pick one of the two voice uplink frequencies at random. Packet: Connect to W5RRR-1 and you will get a packet connect number from the robot. PLEASE DO THIS ONLY ONCE. Connecting multiple times only deprives others of a chance to participate. Turn on monitoring to see who else is working the robot mode and to get status messages from the SAREX packet rig. Please do not connect to other ground stations through the SAREX packet rig. APRS type UI packets are welcome as suggested below: Bob Bruninga and the APRS Working Group suggest the following: Although the SAREX Packet mode will continue to acknowledge connect requests with a serial number response as on previous missions, a new experiment is being conducted to encourage brief position/status exchanges between ground stations using UI packets similar to recent experiments via MIR. By using simple APRS formats, these packets can not only be recognized by all packet users, but they can be automatically displayed on all APRS stations including the thousands of self-contained TH-D7 Handi-Talkies.

### Dumb Terminal Users:

- 1) Do not attempt to CONNECT with any other station.
- 2) Set your UNPROTO to: UNPROTO CQ VIA W5RRR-1
- 3) Go to converse mode: CONV
- 4) Begin your line with ">". APRS stations will capture this as a STATUS packet. (The THD7 will capture the first 20 characters)

5) Optionally, starting the packet with a grid square, may allow automatic plotting by software (APRS). Use these formats:

>GG## comment..... Puts you in Grid GG## (within 100 km)

>GG##gg comment..... Puts you in Grid GG##gg (within 4 km)

>GG##gg\$ comment..... Puts you on map using the "\$" station ICON

Example Station Icons (insert this character in place of "\$"):

>House y House with Yagi ' Satellite Antenna

Car k Truck R Recreational Vehicles Ship or boat v Van Y  
Yacht/Sailboat b Bicycle < Motorcycle ; Camping (tent) l  
Human ' Airplane j Jeep

TH-D7 USERS: Operate normal APRS mode. If you send a message, only send a BULLETIN so that all other stations can see it. Never have more than one active outgoing message. When you see "MY PACKET" displayed, then CANCEL the message. It was successful and everyone else will have seen it too.

APRS USERS: Use the latest versions of APRS software and select the SPACE or GRID-SQUARE mode. Keep your Status and Position comments brief! When you see a packet successfully digipeated, cancel it to cease QRM. For further APRS information see:

<http://web.usna.navy.mil/~brunruning/sarex.html>

Please feel free to listen to the SAREX downlink (145.80 MHz) during the scheduled school contacts. The planned times are listed below.

MET Start Date / Time UTC School Crew Shuttle Location  
ID:06H:59M 21-Jul-99 11:35 Buzz Aldrin Elementary CDR  
S. Africa

ID:20H:14M 22-Jul-99 00:50 Harbor View Elementary CDR  
W. Australia

ID:21H:49M 22-Jul-99 02:25 Awty International MS3 W.  
Australia

2D:20H:17M 23-Jul-99 00:53 Osceola Elementary CDR W.  
Australia

2D:22H:32M 23-Jul-99 03:08 Memorial Middle CDR Texas  
(Note: Mission Elapsed Time (MET) is expressed in  
Day:Hour:Minute format)

Additional STS-93 SAREX information is available at:

<http://garc.gsfc.nasa.gov/~kc6rol/sts93.html>

Additional information regarding SAREX operating frequencies is available at:

<http://garc.gsfc.nasa.gov/~kc6rol/freqs/index.html>

[Info via Will Marchant, KC6ROL, AMSAT-NA SAREX Operations Manager]

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## GENERAL VOICE CONTACTS WITH MIR PLANNED

SB NEWS @ AMSAT  
02-Aug-99

RK3AP has reported through WF1F that a series of amateur radio contacts between the Russian space station Mir and

licensed radio amateurs on earth have been scheduled for the first three Sundays in August (August 1, 8, and 15). The goal of this event is to allow as many ground stations who have never contacted Mir a chance to do so. Those who have already made contacts with Mir in the past are kindly asked to refrain from calling Mir during this special event.

The crew will switch between the following frequencies and call "CQ CQ This is the Russian Space Station Mir":

Primary 145.985 FM simplex

Temporary 1 145.825 FM simplex

Temporary 2 145.800 FM simplex

The crew will not be active during their sleep periods (01:00 to 11:00 UTC), and during some of the passes over Russia, it is possible the Mir crew may have to shorten their planned public access times because of pre-scheduled radio links with family members living on Earth. Slow-scan television transmissions are expected to take place one hour before and one hour after the crew prepares for their general voice contacts. A change in the cosmonaut's work schedule could result in a cancelling of this event.

Miles Mann, WF1F suggests the following operating tips:

- 1) Listen first before transmitting.
- 2) Wait until the crew says CQ or QRZ.
- 3) When you hear CQ/QRZ, just say the last two letters of your callsign, twice (although this doesn't satisfy the legal requirement for proper station identification), and wait for the crew to call you.
- 4) Keep your conversation short and speak very slowly. If you are fluent in French or Russian that's better. English is also acceptable.
- 5) When you are done, the crew will usually remember to say CQ/QRZ for the next station waiting. When the band is too crowded, Jean-Pierre usually says "Break Break", which is his way of asking all stations to please stop transmitting.
- 6) Although the crew will sometimes leave their Kantronics KPC-9612 packet radio TNC ON while they are on voice so they can read OLD mail, please do not make any packet radio transmissions to Mir while they are on voice.
- 7) Do not ask the crew about the QSL card procedures. The Mir crew does not keep a log of radio contacts. Just send a card to one of the two addresses below for verification. SWL cards are also available to those who successfully log reception of Mir during this event.

Please provide the following information with your QSL or SWL card:

Your name and address, country, zip code. Date and time of your contact (in UTC format). Signal report (best guess)

Your station equipment (transceiver and antenna) (optional). Envelopes should be well sealed and should not include cash. Send a self-addressed envelope and one or two IRCs (which

can be purchased at major US post offices) along with your QSL or reception report. Do not display any Amateur Radio callsigns on the outside of the envelope.

Send your report/QSL card to:

Sergej Samburov  
PO Box 73  
Korolev-10 City  
Moscow Area, 141070, Russia

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At 1999-07-27 02:34 PM

*John Bradley wrote:*

We contacted the local emergency services managers, and managed to be included in ESM and EOC training sessions. We have since been tasked with the whole back-up communications thing and are automatically built into all emergency planning, and indeed sit on a couple of committees.

But it sounds like your primary role is still communications even though you might not be using amateur radio frequencies to accomplish those communications. I have no problem with that.

I tend to start drawing the line when agencies ask us to do things that go beyond communications. One local agency started viewing the local ARES group as just another pool of general purpose volunteers instead of volunteers who were communications specialists. They couldn't get enough G.P. help, so they turned to us.

In my role as RACES Radio Officer for my county, I carry a radio capable of communicating on local police, fire, and emergency management frequencies in addition to my amateur radio transceiver. I am also on the county emergency management agency's staff as communications director. I have attended incident command schools and we have an amateur radio representative who sits on the local emergency planning committee. I have no problem with these aspects of our role as it's still communications, not driving the canteen van or doing damage assessment.

73

Bob

## **ULS HAM RADIO PHASE-IN PERIOD BEGINS AUGUST 8**

*The ARRL July 30, 1999*

The FCC begins phasing in the Universal Licensing System for the Amateur Service August 8 at 4 PM Eastern Time. That's when the FCC stops accepting new or upgraded

licensee data from Volunteer Examiner Coordinators under the current amateur licensing system.

The ULS ushers in an era of electronic, interactive filing and handling of Amateur Radio applications. Being phased out under ULS is the familiar paper FCC Form 610 series. A "universal" Form 605--primarily designed for electronic use but also available on paper--will take its place.

A July 23 FCC Public Notice says the Wireless Telecommunications Bureau will begin using the ULS for the Amateur Service on August 16. Existing Amateur Radio licensing data will be transferred into the ULS database during a week long phase-in period. During the phase-in period, the FCC will not process new or upgraded licenses.

Electronic filing of Amateur Radio license renewals using FCC Form 900 ends August 9 at 9 AM Eastern Time. Electronic filing of vanity call sign application Form 610V terminates August 13 at 5:30 PM Eastern Time. Hams should not attempt to file renewal or vanity applications until the ULS comes up August 16.

Starting August 16, hams registered in the ULS may file the new FCC Form 605 electronically at any time of day, seven days a week. FCC Form 605 will be used for license renewals, modifications, cancellations, vanity call sign application, application withdrawals and amendments, as well as requests for duplicate licenses and administrative updates (ie, a change of address or other clerical license modification). Applications for new or upgraded licenses will continue to be filed through a Volunteer Examiner Coordinator.

Automated processing of electronically filed applications will occur nightly each business day, but five days a week instead of seven. There will be no weekend processing under the ULS. The FCC has warned that applicants should anticipate processing delays during the first couple of weeks the ULS is in effect.

The FCC will stop accepting most Form 610 applications next February 16, but club station Form 610B will continue to be valid beyond the six-month transition window to allow time for the FCC to implement new handling procedures.

Among the advantages of the ULS, the FCC says, are fast and easy electronic filing, improved data accuracy through automated checking of applications, and better electronic access to licensing information. One feature of the new ULS is a renewal reminder sent 90 days prior to a license's expiration date. ULS also will simplify the process of submitting fees to the FCC, and the FCC said it anticipates that the ULS will be capable of accepting credit card payments on-line in the near future.

Registration in the ULS is required. Applicants should use FCC Form 606 for both electronic or manual filing. To

register online, visit <http://www.fcc.gov/wtb/uls/> and click on "TIN/Call Sign Registration." A paper FCC Form 606 is available at <http://www.fcc.gov/formpage.html> or from the FCC's Forms Distribution Center, 800-418-3676. The FCC will not process future license grants, upgrades, modifications or renewals for any applicant not registered in the ULS. Individuals eligible to hold a Social Security Number must provide this number to the FCC in order to be registered in the ULS.

A copy of the July 23, 1999 Public Notice is available at <http://www.fcc.gov/wtb/uls>. Additional information on ULS will appear in the Washington Mailbox column in the September issue of OST.

## **WALLIS ISLAND FW8ZZ DXPEDITION DEDICATED TO LOST DXERS**

*The ARRL July 30, 1999*

This summer's FW8ZZ DXpedition to Wallis Island will be dedicated to the memory of Chuck Swain, K7LMU, and Ted Thorpe, ZL2AWJ. Both were lost at sea in January 1966 when returning aboard the ketch Marinero from their DXpedition to Wallis Island as FW8ZZ.

"They were two fine gentlemen and we should not forget them," said Jarmo J. Jaakola, OH2BN, who will handle QSLs for the coming FW8ZZ trip. "It is time to pay homage to those who captured our imagination and helped to create the art and artistry of DX." Jaakola called the original FW8ZZ expedition "an inspiration for many of us who wanted to follow in their footsteps."

Arrangements have been made for this year's FW8ZZ expedition to drop flowers from their plane when approaching the area where Swain and Thorpe were lost.

The 1999 FW8ZZ DXpedition will hit the airwaves July 30 and close down August 3, 1999. A special effort will be made to include operation on the so-called "WARC" bands, but all regular DX bands will be offered. Frequencies will include 3.502, 3.795, 7.002, 7.095, 14.024, 14.195, 21.024, 21.295, 28.002 and 28.495. Equipment includes a Yaesu FT-1000MP and an FT-900 with amplifiers.

Operators are Eric Espositi, FK8GM, Kan Mizoguchi, JA1BK, Leena Laine, OH2BE, and Martti Laine, OH2BH. ARRL DX Advisory Committee Chairman Wayne Mills, N7NG, will act as a global pilot for this expedition. He can be reached at [n7ng@arrl.net](mailto:n7ng@arrl.net)

QSLs for FW8ZZ go to Jarmo J. Jaakola, OH2BN, Kiilletie 5-C-30, FIN-00710, Helsinki, Finland.

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## **Multiple call sign holders could be fined**

The FCC's Riley Hollingsworth, K4ZDH, says the Commission may have to resort to fines to curb the practice of hoarding multiple club call signs.

"The reason we're concerned about this is that we consider it an abuse of our licensing processes," said Hollingsworth, a legal adviser for enforcement in the FCC's Compliance and Information Bureau. "If someone applies for 30 or 40 licenses over time, it really overloads the staff." Hollingsworth pointed out that the call signs often must be typed in manually. "If we have continued abuse, we're going to have to levy some forfeitures, which we have done in the past for abuse of Commission processes. With short staff and budget considerations, we just can't let things like this go on," he said.

Earlier this month, a ham listed as the trustee for more than three dozen club station call signs agreed to give up all but one of them. Motoaki Uotome, JA1GZV, who also holds a U.S. Extra license as W9BO, apparently was the trustee of 41 club station call signs. Last month, the FCC set aside 14 recently granted club station call signs and 12 recently granted club vanity club signs he held and asked Uotome to justify the grants.

The U.S. is not the only country in which Uotome has collected a call sign. An Internet search indicates that he also holds one or more Amateur Radio call signs in Australia, Chile, and Uruguay.

Hollingsworth concedes that the FCC rules do not specify an upper limit to the number of call signs an individual may hold, but says "the underpinning of the rules is common sense." He recommended that multiple call sign holders should seriously consider turning in their excess grants before they hear from the FCC. "because we will be pursuing them."

News of the cases has already had an impact. "We've had several others come in on a voluntary basis and turn their excess number in," Hollingsworth said.

The FCC says that former holders of multiple call signs reclaimed by the FCC may not reapply for any of them under the former holder exception to the two-year waiting period. Additionally, the FCC does not plan to allow relatives claim them in the future as relatives of deceased former holders because the current holders do not qualify as legitimate license grantees.

## FCC Says Hams Next in Line for ULS

The FCC says the Amateur Service is the next in line to be converted to the Universal Licensing System. Amateur Radio is scheduled for ULS "deployment" in August. Most of the remaining wireless services will be converted from their old licensing systems to ULS in phases during the remainder of 1999.

The FCC has adopted a Report and Order to enable public access to application and licensing information in the ULS via the Internet. The FCC says its decision will "significantly enhance the ability of the public to access public record information regarding wireless licensees, at a reduced cost."

The Universal Licensing System will replace the venerable Form 610 series with a new, inclusive electronic document known as Form 605. It also will incorporate the vanity call sign program. The ULS will permit amateurs to file applications, modifications or renewals via the Internet. Individual amateurs will not be required to file electronically, however. So far, nearly 6,000 amateurs have registered with the ULS

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## **No Changes to Amateur Radio Examination Questions**

*Newsline*

The National Conference of Volunteer Examiner Coordinators will not issue new Amateur test questions for the foreseeable future.

The NCVEC is the volunteer group that oversees the Amateur Radio test question pools for all examinations. Last fall its Question Pool Committee announced that all updates were being put on hold until after the FCC acts on restructuring the U.S. Amateur Radio Service. That has not happened yet, so the committee has been forced to put everything on the back burner until the FCC acts.

The Advanced class question pool scheduled to expire at midnight on 30 June will not change. The current examination questions and study materials are valid until further notice.

The NCVEC will not be able to begin revising the questions until the FCC announces its restructuring plan. When that will be announced, nobody is quite sure.

## MECHANICAL" SWR

Have you ever wondered about SWR - what does it really look like to a radio signal?

An interesting experiment can be undertaken the next time you find yourself with a relatively long length of rope that happens to be attached to a tall mast, such as a flagpole or tower.

You probably have had such a line in your hands at one time or another, and noticed that wiggling the line back and forth would cause waves of mechanical energy to travel up and down the rope. You might even have found that with the proper spacing of the "wiggles" that a continuous series of waves could be made to appear on the rope, and with even finer tuning, the waves could be made to seem to stand still. These are standing waves!

An interesting experiment is to send just one pulse of energy up the rope. When the single wave gets to the top of the mast, it will be reflected back down the rope - in the opposite phase from the upward wave! Exactly as would happen if it were a single electrical pulse travelling down a length of cable and being reflected upon reaching an open or shorted condition at the end. Essentially all the energy is reflected, none is absorbed by the load.

Now, what happens if you change the conditions in mid stream? If you hold the rope (think of it as a transmission line) tautly, and send a single wave up the rope as before, but before the pulse of energy reaches the top of the mast you suddenly loosen the tension - look what happens! At the point where you changed the tension, another energy pulse will suddenly appear, in opposite phase to the upward travelling pulse, and it will travel DOWN the rope toward your hand! This is a mechanical representation of SWR.

What you have done is to change the "impedance" of the transmission line (the rope) suddenly. In other words, you have created a discontinuity or "mismatch". A wave of mechanical energy will appear at that point, of opposite phase to the "forward" pulse, and return to the sending point.

This mechanical representation is exactly the same thing that happens to an electrical signal on a transmission line when it meets a discontinuity - whether it be an actual change in line impedance, or the signal reaches the end of the line. If the conditions are such that the load impedance is properly matched to the transmission line, then the forward power is all absorbed by the load, and none is reflected. But, if the load does not properly match the line, some (or most, or all - depending on the absorbing abilities of the termination) of the power is reflected back to the "transmitter" end.

Our mechanical model suffers from some flaws in comparing the mechanical and electrical versions of a signal travelling on a transmission line. For example, if you are using a properly tuned transmitter (or an antenna coupler), when the "return" signal is re-reflected at the "conjugate match" (think of it as a perfect electrical mirror) and travels back up the

line. Eventually, all the power is either radiated by the antenna, or lost as heat in the transmission line.

Back to the mechanical model for a second. If you could accurately measure the small "reflected" wave created when you changed the tension on the line, you would find that its amplitude (power) exactly equaled the reduction in the "power" of the forward wave. Nothing was lost, it just changed direction - just as happens in a real (electrical) situation.

This interesting diversion gives you a way to prove to yourself that standing waves are real, and that things such as line impedance and load matching really matter. In the mechanical model, if the termination at the top of the pole were a mechanically absorbent material, such as a sponge, instead of a "hard" reflection like a knot tied to the mast, no power would be reflected, it would all be absorbed by the "load".

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**Proud to be a Ham**  
*Lee Groce, N4AAD*

I have heard and seen many opinions both for and against being an Amateur Radio operator. I just want to say that I am proud to be a Ham! I wanted to chat with the late Barry Goldwater, K7UGA and King Hussein, JY1, but never got the opportunity to do so. Having been a Ham for 20 years, I spent the first several years on 2 Meters and HF CW. I have made lifelong friends on both and kept a CW schedule for at least 12 years with a friend I met on 2 Meters.

We need to introduce the fun and fascination of amateur Radio to our children. When I was twelve years old, the fact that I could hear stations from around the world amazed me, much less chat with other Hams on a dipole and a couple of hundred watts. In high school, I met a man who helped me make my dreams come true. He was not only my teacher, and Elmer, but my friend as well.

While "surfing the net" I saw two things saddened me deeply—a publication of nearly 40 years and the Amateur Radio station at the U.S. Capitol have closed their doors. It was suggested that the internet has something to do with the decline in people getting their licenses, and it's probably true. I see the internet as an extension of the Amateur radio hobby. One can find information about clubs, neighborhood Hams, shortwave broadcast stations and more. I believe our society has become accustomed to the fast pace of life and instant gratification. We are no longer willing to work on things that take up our valuable time.

Recently, my HF dipole started to give me high SWR. I am not able to repair or replace it by myself. Getting help is difficult these days, so I sit and listen until help is available.

A friend and I co-own the local 440 MHz repeater, but it's not used much. I guess cellular phones have replaced free autopatches for good.

A few years ago, our club tried to convince the local authorities of our usefulness in large disasters, but they weren't interested. I belonged to the local Red Cross chapter to assist if their "normal" mode of communications went down—our Hams seldom got a chance to demonstrate our communications capabilities.

I challenge the Amateur Radio operators worldwide—try to make a difference. Try to introduce amateur Radio in the grade schools and high schools . try to become involved in your communities' ARES and Skywarn. Offer your services to the local police, EMS, Red Cross, etc. if your child shows an interest in your radio hobby, share the fun with them. Become a volunteer or Elmer to those people who express an interest in radio, whether it be the 2-meter or HF rig in the car. Whenever someone asks, "What's that radio?" be prepared to explain Amateur Radio to them.

Teach good operating procedures, and practice what you preach. Let's expand our quality as well as our quantity of new and existing hams. Teach the art of homebrewing or kit building to new Hams. A lot of people can't afford a new radio after obtaining their license. Building a kit, especially a CW transceiver may be just the thing to a kid on a budget trying to get on the air.

If we all operate with respect, consideration and good will toward our fellow operators, the bands that we operate on will be more enjoyable to use.

Remember, cellular telephones use repeaters and the internet uses telephone lines and electricity. If power and telephone lines go out, cellular telephones can't handle the overload of users. Our radios can operate in almost any emergency situation.

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## Packet Radio

During a recent emergency exercise in Michigan, Packet Radio was used extensively for communications between an Emergency Operations Center ("EOC") and a command post in the field. All messages transmitted on this circuit used the standard NTS 'radiogram' format. The speed and accuracy of packet radio combined with the complete information provided by the NTS message format, did much to expedite message routing and delivery. When a 'hard-copy' message appeared on the packet radio printer, all one had to do was remove the message and hand it to a runner for delivery to the appropriate official within the EOC or command post. Because everything was written out, no confusion occurred as

to message content. The individual receiving the message knew exactly which official at what location provided or requested the information and at what time he/she did so.

When officials wished to originate a message, they were encouraged to simply fill-out a blank message form with the name and location of the addressee, the message text, and their signature. The message was then given to the communicator who completed the preamble, and sent it via the most appropriate network (FM, CW, or packet). What surprised many of the least experienced radio amateurs was the fact that these officials actually appreciated the requirement for written messages. After all, it is in the interest of both the communicator and the public safety official to avoid the confusion that occurs when a message passes through several verbal 'translations' as often occurs when third-party messages are handled informally.

#### *A disturbing trend*

One of the greatest difficulties experienced during the exercise was a lack of portable Packet Radio stations! Despite a few week's notice and the fact that three ARES/RACES organizations were participating, only two portable packet stations could be deployed. It appears that interest in Packet Radio, at least in the Southeastern Michigan area, has dropped off considerably. Many have suggested this situation may be due to the competition from the Internet. However, a far more important question is this: What does it mean for the future of Amateur Radio public service when one of our most versatile and efficient public service tools is so terribly underdeveloped? We hear quite a bit of talk about threats from outside the Amateur Radio Service, however, perhaps the greatest threat to our future is the lack of commitment to public service communications amongst rank-and-file radio amateurs! Such tools as Packet Radio, APRS, ATV, and similar specialized modes, all of which have the potential to significantly increase the value and utility of Amateur Radio as a public service organization, are simply not being developed in many areas. What is especially interesting is that many of these tools are of most utility at VHF and UHF frequencies, all of which are available to 'no-code' technicians. Wasn't the 'No-Code' license supposed to attract the very type of individual who was supposed to develop these capabilities? This can't help but beg the question; is it really CW that's at fault for the decline of interest in Amateur Radio?

#### *Speaking of CW*

During the same emergency exercise, part of the scenario called for communications between the Headquarters EOC and various American Red Cross facilities within Michigan. Repeated attempts were made to establish communications on

75-meter SSB with no success, despite the fact that a net was in progress and several stations were listening for exercise traffic. Therefore, operations were shifted to the Michigan "QMN" CW Frequency and guess what? Absolutely no difficulty was had communicating! Traffic was cleared quickly and efficiently with very few 'fills' despite the low-power, portable HF equipment (50 Watts) and a temporary antenna. At one point during the exercise, direct communications was established with Falls Church, VA, and a message for ARC National Headquarters was transmitted through the facilities of the "Hit and Bounce" CW Net on 40 Meters. Again, traffic was passed with little difficulty (thanks to WA4DOX for accepting the traffic).

This is not the first time this situation has occurred, either. Such situations often occur during daily NTS operations when propagation conditions are poor. The fact is, CW offers distinct advantages for fast, efficient traffic handling under poor conditions or when using mobile, portable, or low-power HF systems. I have yet to be convinced that CW is obsolete within the context of High Frequency communications! Let's not forget that CW remained in widespread use in both the military and maritime services until which time High Frequency communications were replaced with satellite-based infrastructure. Amateur Radio has yet to replace HF Radio with similar satellite systems of proven reliability.

#### *Camping and hiking season*

Now that summer is here, many of us will take a QRP transceiver along when camping or hiking in remote areas. In many of these locations, cellular telephone is inadequate or nonexistent. A simple QRP CW transceiver makes it possible to check in to an 80-meter Section Net or an independent wide-area traffic net on 40 Meters in order to transmit messages to family and friends back home. Such messages may be as simple as letting others know you are OK, or perhaps notifying someone of a change in one's plans. Likewise, such a rig may come in handy should an emergency arise in a remote area.

During a recent hunting trip in the Upper Peninsula of Michigan, I used our CW traffic net to alert the families of two members of our party of their intent to leave two days early. Despite the fact that three cell phones were available amongst the group, no service was available and the nearest pay phone was a half-hour drive away. The messages arrived just fine and considerable inconvenience was prevented.

To be continued in October issue of AARC Newsletter.

QST QST

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# Anchorage Amateur Radio Club's

## 28th Annual Ham-Fest

Featured Speakers

# Gordon West, WB6NOA

also ARRL NW Director Greg Milner W7OZ

and Alaska Pioneer Broadcaster Augie Hiebert

Saturday September 25<sup>th</sup> 10-5

Sunday September 26<sup>th</sup> 10-3



Kincaid Park Outdoor Center  
Go West on Raspberry Road to End

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ARES  
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ARRL

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TV

Admission: Adults \$3.00 • 13 - 17 \$2.00 • Under 12 Free

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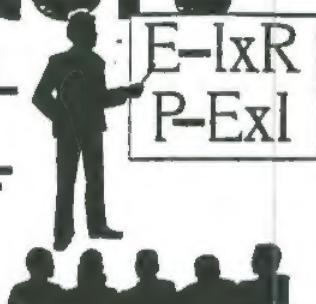
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# HAM RADIO CLASSES

## Anchorage Amateur Radio Club

### Instructors

Lil Marvin NL7DL



Rick Marvin KL7YF

Novice - Technician  
-General-  
Classes begin

OCT. 4, 1999  
6:00 to 9:00 P.M.

### REQUESTED STUDENT MATERIALS :

NOVICE: 0-5 WPM ARRL or W5YI Code tapes or equivalent

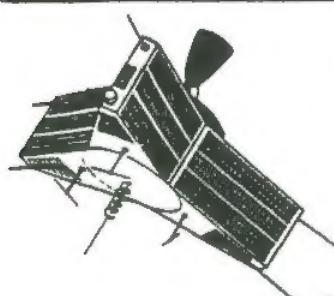
TECHNICIAN: Gordon West's New No Code Book, or equivalent

GENERAL: Gordon West, ARRL or - General Class Manual + 13WPM code tapes.

Fee : \$35.00

### TO REGISTER

C 2 7 7 - 6 7 4 1  
A L L



Contact the instructors or get materials at  
the Hamfest **SEP. 25 & 26, 1999**

**Begin practicing the code now!!!**

Classes will be held at Red Cross Bldg, 2nd Floor  
8th and Cordova

## The Anchorage Amateur Radio Club News

**Anchorage Amateur Radio Club, Inc**  
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1999 fall HAARP "Research Campaign" from Ed Cole, AL7EB

On July 31 I traveled out to Gakona, Alaska to visit the HAARP Open House. Jim Heim, KL7WP, a Kenai ham and member of my local ham club rode with me. Jim is the News Reporter for a local AM radio station, KSRM. He took the opportunity to interview some of the HAARP staff and scientists. He has put together a special half-hour program which will "air" this Sunday at 8:00-8:30 am on FM-96.5 and FM-101.7 MHz on the Kenai Peninsula. We had a beautiful sunny day for the trip! I had a special meeting with Ed Kennedy to discuss ideas for a follow-on test during the fall HAARP "Research Campaign", and also talked with Dr. Mike Kelly of Cornell.

Two ideas for experiments resulted from those discussions:

1. A follow-on to the March 144.1 MHz Test to verify what was seen in March was "real", and also try to observe forward scattering East of HAARP. I'll go into more detail in a later e-mail.

2. Mike Kelly has proposed an experiment and he is inviting amateur radio participation. He wishes to observe a peculiar cloud phenomena which occurs only in arctic regions. Apparently anomalous ice clouds form at very high altitudes due to thinning of carbon dioxide during certain times of the year which increases the radiation of heat back to space at those altitudes. These clouds have been little studied to date. Mike wants to study their size and drift rate using the HAARP transmitter as a kind of HF radar. The clouds apparently are quite thin but will reflect a small percentage of RF energy. He is looking to Alaskan hams with general coverage HF receivers/antennas to help him detect the reflected signal. This will be a long term project (weekly tests over months?) requiring a commitment from the hams who wish to participate. A requirement will be use of an extremely accurate time reference. A GPS "clock" is suggested. More about this, later.

Ed Kennedy, HAARP Director, has informed me that the next campaign period will be from Sept. 15 to Oct. 15. He is suggesting that we schedule two weekend time periods so that anything "discovered" during the first session may be examined again. I need to know if any of you are willing to participate, again. I'll suggest Saturdays: Oct. 2 and Oct. 9th as preliminary dates (probably late morning local time). In particular it would be useful to get some stations east of Glennallen. Possibly Whitehorse or Haines? If a high power 2m amp can be found, it could go there for transmitting back to the Anchorage area. Maybe a portable station setup? I will not schedule any 6m operation this time, but maybe some stations will want to utilize the test period for themselves.